

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF THE CLAIMS

1. (Currently Amended) A gray scale ~~reference voltage generator for connection to column drivers of driver for~~ a thick dielectric electroluminescent display, comprising:

a counter ~~for~~ receiving gray level data from an incoming video signal and in response counting for a time interval proportional to said gray level data; and

a non linear voltage ramp generator connected to said counter ~~for generating, said non linear voltage ramp generator outputting a~~ ramping voltage for application to ~~said column drivers~~ columns of said display during said time interval, wherein said ramping voltage conforms to a curve having an inverted s-shape, with an initial convex portion followed by a concave portion so as to compensate for luminance versus voltage characteristics of said thick dielectric electroluminescent display.

2. (Currently Amended) The gray scale ~~reference voltage generator~~ column driver of claim 1, wherein said initial convex portion conforms generally to a negative second derivative with respect to said time interval, and said concave portion conforms generally to a positive second derivative with respect to said time interval.

3. (Currently Amended) The gray scale ~~reference voltage generator~~ column driver of claim 1, wherein said counter is an 8-bit counter for delineating said time interval to fully define 256 gray levels.

4. (Currently Amended) The gray scale ~~reference voltage generator~~ column driver of claim 1, wherein said ramping voltage for a negative row voltage is $V_{g\ neg}(t_m - t)$ expressed as a function of the difference between the time t_m for the ramping voltage to reach a maximum luminance voltage value V_m at the end of said time interval, and

wherein said ramping voltage for a positive row voltage is $V_{g\ pos.}(t)$, where $V_{g\ pos.}(t) = V_m - V_{g\ neg.}(t_m - t)$ and said gray level data is converted to complement values.

5. (Currently Amended) The gray scale ~~reference voltage generator column driver~~ of claim 4, wherein said ~~non-linear non linear~~ voltage ramp generator further comprises an integrator circuit and at least two current sources for generating and applying different currents to said integrator circuit such that when a first one of said current sources is connected to said integrator circuit a first segment of said ramping voltage is generated, when both of said current sources are connected in parallel to said integrator circuit a second segment of said ramping voltage is generated, and when the second one of said current sources is connected to said integrator circuit a final segment of said ramping voltage is generated.

6. (Currently Amended) The gray scale ~~reference voltage generator column driver~~ of claim 5, wherein said first one of said current sources generates a current that decreases during said time interval, and said second one of said current sources generates a current that increases during said time interval.

7. (Currently Amended) The gray scale ~~reference voltage generator column driver~~ of claim 5, wherein said at least two current sources are time-dependent voltage feedback controlled current sources.

8. (Withdrawn) The gray scale ~~reference voltage generator column driver~~ of claim 5, wherein said at least two current sources are constant current sources.

9. (Currently Amended) The gray scale ~~reference voltage generator column driver~~ of claim 5, wherein said ~~non-linear non linear~~ voltage ramp generator further comprises a threshold control circuit for controlled switching between said two current sources.

10. (Currently Amended) The gray scale ~~reference voltage generator column driver~~ of claim 5, wherein said ~~non-linear non linear~~ voltage ramp generator further comprises a frame polarity control circuit for ~~to select selecting~~ between said ramping voltage for a positive row voltage and said ramping voltage for a negative row voltage.

11. (Currently Amended) The gray scale ~~reference voltage generator column~~
driver of claim 5, wherein said current sources further include control inputs for
controlling curvature of said first and second segments respectively.

12. (Currently Amended) The gray scale ~~reference voltage generator column~~
driver of claim 9, wherein said threshold control circuit further includes a control input
for setting a transition voltage between said first and second segments of said ramping
voltage.